

WHAT IS CLAIMED IS:

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A communicating apparatus for performing an asynchronous communication with a base station, comprising:

5 a receiving device for receiving a down link signal, which is transmitted from the base station and in which a division signal is inserted for each of constant time intervals;

a detecting device for detecting division signals out of the received down link signal, in phase to the constant time intervals;

10 an adding device for adding the detected division signals over a predetermined time duration, which is longer than the constant time interval, with matching phases for each of the constant time intervals, so as to generate accumulated additional values; and

15 a memory device for storing the accumulated additional values generated by said adding device, to thereby perform synchronization capturing with the base station on the basis of the accumulated additional values added over the predetermined time duration and stored in said memory device.

20 2. A communicating apparatus according to claim 1, wherein said detecting device calculates a correlation between a signal correlated with the division signal and the received down link signal, and detects the division signal out of the received down link signal
25 when the calculated correlation exceeds a predetermined threshold value.

3. A communicating apparatus according to claim 1, wherein said memory device has a plurality of memory areas to store the accumulated additional values with packing each of the accumulated additional values in respective one of the memory areas, when said adding device generates the accumulated additional values by adding at different timings within the constant time interval.

4. A communicating method of performing an asynchronous communication with a base station, comprising:

a receiving process of receiving a down link signal, which is transmitted from the base station and in which a division signal is inserted for each of constant time intervals;

a detecting process of detecting division signals out of the received down link signal, in phase to the constant time intervals;

an adding process of adding the detected division signals over a predetermined time duration, which is longer than the constant time interval, with matching phases for each of the constant time intervals, so as to generate accumulated additional values; and

a storing process of storing the accumulated additional values generated by said adding process into a memory device, to thereby perform synchronization capturing with the base station on the basis of the accumulated additional values added over the predetermined time duration and stored in said memory device.

5. A communicating method according to claim 4, wherein said detecting process calculates a correlation between a signal correlated with the division signal and the received down link signal, and detects the division signal out of the received down link signal when the calculated correlation exceeds a predetermined threshold value.

6. A communicating method according to claim 4, wherein said memory device has a plurality of memory areas, and said storing process stores the accumulated additional values with packing each of the accumulated additional values in respective one of the memory areas, when said adding process generates the accumulated additional values by adding at different timings within the constant time interval.